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NOTICE OF ALLOWANCE AND FEE(S) DUE

23377 7590 09/15/2009

WOODCOCK WASHBURN LLP
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

EXAMINER

BRUCKART, BENJAMIN R

ART UNIT

PAPER NUMBER

2446

DATE MAILED: 09/15/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/09,426	06/27/2003	Richard T. Oesterreicher	**BU-0124	7950
TITLE OF INVENTION: SYSTEM AND METHOD FOR DIGITAL MEDIA SERVER LOAD BALANCING				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	12/15/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

23377 7590 09/15/2009
WOODCOCK WASHBURN LLP
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,426	06/27/2003	Richard T. Oesterreicher	**BU-0124	7950

TITLE OF INVENTION: SYSTEM AND METHOD FOR DIGITAL MEDIA SERVER LOAD BALANCING

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nonprovisional	NO	\$1510	\$0	\$0	\$1510	12/15/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
BRUCKART, BENJAMIN R	2446	709-226000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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23377	7590	09/15/2009	EXAMINER	
WOODCOCK WASHBURN LLP CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			BRUCKART, BENJAMIN R	
			ART UNIT	PAPER NUMBER
			2446	
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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 681 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 681 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/609,426

Applicant(s)

OESTERREICHER ET AL.

Examiner

BENJAMIN R. BRUCKART

Art Unit

2446

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 6/8/09.
2. ☒ The allowed claim(s) is/are renumbered 1-8.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 3/10/09, 6/4/09, 8/17/09
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview and email with Aaron Bourgeois on 8/27/2009.

The application has been amended as follows:

In the Claims:

1. (Currently amended) A method for selecting a server from a plurality of servers to service a third request for an asset, comprising:

generating, at an adaptable cache of a first server, a list of pairs of requests for the asset and determining a pair of requests having the shortest interval between start times, wherein the pair of requests comprise a first request and a second request;

responsive to the first request, streaming the asset from a storage system of the first server and storing the asset on the adaptable cache of the first server as it is being streamed from the storage system of the first server;

responsive to the second request, streaming the asset from the adaptable cache of the first server;

detecting the addition of new content the asset to an adaptable cache on a first server in the plurality of servers;

updating a first state table on the first server with information about the asset stored on the adaptable cache of the first server;

communicating the information about the asset stored on the adaptable cache of the first server to each server in the plurality of servers;

updating state tables of each of the other servers in the plurality of servers with the information about the asset stored on the adaptable cache of the first server;

designating a director from the plurality of servers to receive the third request, wherein any of the plurality of servers can be designated as the director;

determining that the asset is not stored on an adaptable cache of the director by accessing a director's state table stored on the director, wherein the director's state table includes parametric information for each server in the plurality of servers, and wherein the parametric information comprises adaptable cache contents information for each server in the plurality of servers; and

under the direction of the director,

determining a set of servers from among said plurality of servers that have the asset stored in their respective adaptable caches by examining the state table on the director;

determining a load factor for each of the set of servers; and

selecting a second server from among the set of servers based on the load factor.

2. The method of claim 1, wherein the step of designating comprises designating the director in a round-robin fashion.

3. The method of claim 1, wherein the director is designated based on a load factor analysis for each server among said plurality of servers, the load factor for each server based on parametric information stored in a respective state table thereon, and wherein the designated director has a lowest load factor.

4. The method of claim 1, further comprising selecting the director upon determining that the asset is present on the director.

5. The method of claim 1, wherein said parametric information further comprises functional state and current load of each server.

6. The method of claim 1, wherein said parametric information further comprises whether each server comprises extended memory.

7. The method of claim 1, wherein said parametric information further comprises whether each server comprises an inline adaptable cache.

8. The method of claim 1, wherein said parametric information further comprises whether each asset represented in the parametric information is a new release.

9. (Currently amended) The method of claim 1, further comprising storing the asset on the ~~director's~~ adaptable cache of the director responsive to the third request.

10. (Currently amended) The method of claim 1, further comprising forwarding the third request to the second_server.

11. (Currently amended) The method of claim 1, further comprising redirecting the third request to the second_server.

12. The method of claim 1, wherein selecting the second server from among the set of servers further comprises:

identifying as available servers any servers whose load factors are below threshold limits;

determining that there are no available servers; and

upon determining that there are no available servers, selecting a server having a lowest load factor from the other servers having the content.

Claims 13-20. Cancelled.

21. (Currently amended) A computer-readable medium comprising computer-executable instructions for performing a method comprising:

generating, at an adaptable cache of a first server, a list of pairs of requests for an asset and determining a pair of requests having the shortest interval between start times, wherein the pair of requests comprise a first request and a second request;

responsive to the first request, streaming the asset from a storage system of the first server and storing the asset on the adaptable cache of the first server as it is being streamed from the storage system of the first server;

responsive to the second request, streaming the asset from the adaptable cache of the first server;

~~adding new content an asset to an adaptable cache on a first server in a plurality of servers, wherein the first server updates~~ updating a first state table on the first server with information about the the asset stored on the adaptable cache of the first server, wherein the first server communicates the information about the asset stored on the adaptable cache of the first server to each server in the plurality of servers, and wherein each server in the plurality of servers updates each state table of each server in the plurality of servers with the information about the asset stored on the ~~first server's~~ adaptable cache of the first server;

designating a director from the plurality of servers to receive ~~the a third~~ request, wherein any of the plurality of servers can be designated as the director;

determining that the asset is not stored on ~~a director's an~~ adaptable cache of the director by accessing a state table stored on the director, wherein the state table includes parametric information for each server in the plurality of servers, and wherein the parametric information comprises adaptable cache contents information for each server in the plurality of servers; and

under the direction of the director,

determining a set of servers from among said plurality of servers that have the asset stored in their respective adaptable caches by examining the state table on the director;

determining a load factor for each of the set of servers; and,

selecting a second server from among the set of servers based on the load factor.

22. The computer-readable medium of claim 21, wherein the step of designating comprises designating the director in a round-robin fashion.

23. The computer-readable medium of claim 21, wherein the step of designating comprises designating the director on the basis of lowest load.

24. (The computer-readable medium of claim 21, wherein the step of selecting further comprises selecting the director if the requested content is present on the director.

25. The computer-readable medium of claim 21, wherein said parametric information further comprises functional state and current load of each server.

26. The computer-readable medium of claim 21, wherein said parametric information further comprises whether each server comprises extended memory.

27. The computer-readable medium of claim 21, wherein said parametric information further comprises whether each server comprises an inline adaptable cache.

28. The computer-readable medium of claim 21, wherein said parametric information further comprises whether each asset represented in the parametric information is a new release.

29. (Currently amended) The computer-readable medium of claim 21, further comprising computer-executable instructions for storing the asset on the ~~director's~~ adaptable cache of the director responsive to the third request.

30. (Currently amended) The computer-readable medium of claim 21, further comprising computer-executable instructions for forwarding the third request to the second server.

31. (Currently amended) The computer-readable medium of claim 21, further comprising computer-executable instructions for redirecting the third request to the second server.

32. The computer-readable medium of claim 21, wherein the step of selecting the second server from among the set of servers further comprises:

identifying as available servers one or more servers whose load factors are below threshold limits;

determining that there are no available servers; and
upon determining that there are no available servers, selecting a server having a lowest load factor from the other servers having the content.

33. The method of claim 1, further comprising updating parametric information in a state table associated with the selected server, and communicating updated parametric information to the other servers among said plurality of servers.

34. The method of claim 33, wherein the updated parametric information is communicated via multicast.

35. The method of claim 33, wherein the updated parametric information is communicated via a broadcast message.

REASONS FOR ALLOWANCE

The following is the examiner's statement of reasons for allowance:

Renumbered independent claims 1 and 13 among other things teach: generating, at an adaptable cache of a first server, a list of pairs of requests for the asset and determining a pair of requests having the shortest interval between start times, wherein the pair of requests comprises a first request and a second request in a load balancing server architecture, where each server has an adaptable cache, can be a designated a director, and contains a state table with parametric information about its cache, and the caches of all the other servers the server communicates and updates the state tables with in a network environment.

The reason for allowance also gleaned from now patent 7,500,055 is the list of pairs generated at the adaptable cache based on request interval times.

The provisional double patenting rejection is dropped because it was the last rejection pending and the child case 11/468,613 is still pending.

The prior art does not teach the cited limitation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The information disclosure statements of 3/10/09, 6/4/09 and 8/17/09 have been considered.

The amendments to the specification and drawings are accepted.

CORRESPONDANCE INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 9:00-5:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin R Bruckart
Examiner
Art Unit 2446

Application/Control Number: 10/609,426

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Art Unit: 2446

/Benjamin R Bruckart/

Primary Examiner, Art Unit 2446